

## TEHAMA COUNTY AIR POLLUTION CONTROL DISTRICT

### **RULE 4:14 - FUEL BURNING EQUIPMENT**

*(Adopted 8/10/1971; Amended 9/10/1985, 4/30/1997, 11/10/1998)*

- A. Purpose: The purpose of this rule is to limit emissions of oxides of nitrogen (NO<sub>x</sub>) from non-mobile fuel burning equipment.
- B. Applicability:
  - 1. This rule applies to new and existing non-mobile fuel burning equipment which has a maximum heat input rating of 50 million British Thermal Units (BTU) per hour (gross) or more.
- C. Definitions:
  - 1. For the purpose of this rule the following definitions shall apply:
    - a. Air Contaminant: Any discharge, release, or other propagation into the atmosphere directly or indirectly caused by man and includes, but is not limited to, smoke, charred paper, dust, soot grime, carbon, fumes, gases, odors, particulate matter, acids or any combination thereof.
    - b. California Air Resources Board (CARB): The California State Air Resources Board the powers and duties of which are described in Part 2 of Division 26 of the California Health & Safety Code (commencing with §39500).
    - c. Fuel Burning Equipment: Any article, machine, equipment or contrivance which combusts any fuel. If the simultaneous operations of more than one such article, machine, equipment or contrivance are required for the production of useful heat or power, then the minimum number necessary shall be considered as one piece of fuel burning equipment.
    - d. Heat Input: The chemical heat released due to fuel combustion in a piece of fuel burning equipment, using the higher heating value of the fuel. This does not include the sensible heat of incoming combustion air.
    - e. Mobile: Describes a device by which any person or property may be propelled, moved, or drawn upon the surface, waterways, or through the atmosphere, and which emits air contaminants. For the purpose of this rule, the description "Mobile" includes registered motor vehicles which are licensed and/or driven on the public roadways of the state of California.
    - f. Particulate Matter: Any material, except uncombined water, which exists

in a finely divided form as a liquid or solid at standard conditions.

- g. Rated Heat Input: The heat input capacity in MMBTU per hour specified on the nameplate(s) of the fuel burning equipment, unless the fuel burning equipment is operated, consistent with the permit to operate above the heat input capacity specified on the nameplate(s), in which case the maximum operated rate(s) shall be used as the Rated Heat Input.
- h. Start-up Period: The one hour time frame immediately following the start-up of the fuel burning equipment.
- i. Shut-down Period: The one hour time frame immediately preceding the shut-down of the fuel burning equipment.
- j. United States Environmental Protection Agency (US EPA): Refers to the administrator or the appropriate designee of the United States Environmental Protection Agency.

D. Requirements

- 1. Fuel burning equipment shall not emit NO<sub>x</sub>, referenced at dry stack-gas conditions, and 3 percent by volume stack-gas oxygen (O<sub>2</sub>) in excess of:
  - a. 125 parts per million by volume (ppmv), when operated on gaseous fuel; and
  - b. 225 ppmv, when operated on liquid and/or solid fuels; and
  - c. The heat input weighted average of the limits specified in D.1.a. and D.1.b. above, when operated on combinations of both gaseous and liquid and/or solid fuels.
  - d. Emissions concentrations shall be corrected to 3 percent oxygen (O<sub>2</sub>) as follows:

$$\frac{[\text{ppm NO}_x]_{\text{corrected}}}{\text{x } [\text{ppm NO}_x]_{\text{measured}}} = \frac{20.95\% - 3\%}{20.95\% - [\%O_2]_{\text{measured}}}$$

E. Exemption

- 1. The provisions of this rule shall not apply to any fuel burning equipment which is subject to NO<sub>x</sub> emission limits as specified in District Rule 4:31 Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters

Oxides of Nitrogen Control Measure, Rule 4:34 Stationary Internal Combustion Engines, and Rule 4:37 Determination Of Reasonably Available Control Technology For The Control Of Oxides Of Nitrogen From Stationary Gas Turbines.

F. Monitoring and Recordkeeping Provisions

1. Any owner or operator of fuel burning equipment subject to this section shall maintain all records necessary to demonstrate compliance with this section for a period of two (2) calendar years at the facility where the subject equipment is located. The owner or operator shall maintain records of the following information for each day the equipment is operated:
  - a. Identification and location of equipment subject to the requirements of this section; and
  - b. Calendar date of record; and
  - c. The number of hours the equipment is operated during each day; and
  - d. Unit load, fuel type, actual time of start-ups and shut-downs, breakdown periods, and the type and duration of maintenance and repairs; and
  - e. The results of all compliance tests and monitored stack gas oxygen (O<sub>2</sub>) concentrations; and
  - f. If a flue gas recirculation system is used a record of the percentage of the flue gas that is recirculated to the combustion chamber shall be maintained.
  - g. If continuous emission monitoring (CEM) is used the following procedures shall be followed and recorded:
    - 1) NO<sub>x</sub> emission concentrations shall be measured and corrected to 3 percent volume stack gas O<sub>2</sub>, on a dry basis; NO<sub>x</sub> emission concentrations shall be averaged over a period of 15 consecutive minutes.
    - 2) Identify all time periods during which NO<sub>x</sub> standards were exceeded, the reason that standards were exceeded, the action taken to correct the exceedance(s), and how the owner or operator will prevent any similar future exceedance(s).
    - 3) Identify all time periods for which operating conditions and pollutant data were not obtained, including reasons for not obtaining sufficient data, and a description of all corrective

actions taken.

- h. Any owner or operator that uses an alternate fuel other than the designated standard fuel in any fuel burning equipment shall maintain daily records of each occurrence. Each record shall specify the reason why an alternate fuel was used in fuel burning equipment and shall include the type of fuel, quantity of fuel, and the hours of operation during which an alternate fuel was used. Each record shall be summarized for each calendar year. If non-gaseous fuel is used during a natural gas curtailment, the owner or operator shall obtain information from the natural gas supplier to verify the time period of curtailment.
- i. Record the heat input weighted average of the limits specified in Section D.1.a. and D.1.b. when operated on combinations of both gaseous and liquid fuels and/or solid fuels.

G. Compliance Source Testing

1. Frequency

- a. All fuel burning equipment covered under Section D.1. shall demonstrate compliance through compliance source testing not less than once every two calendar years, or 8760 hours, whichever occurs first. Determination of hours of operation shall be by a non-resetting hour meter that shall be automatically activated whenever the fuel burning equipment is in operation.

H. Test Methods

1. Compliance with NO<sub>x</sub> emission limits in Section D.1. shall be determined using one of the following test methods, as appropriate:

US EPA Method 7, 7A, 7C, 7E, or CARB Method 7 or 100.

- 2. Determination of percent by volume stack-gas oxygen shall be determined using US EPA Method 3 or 3A, or CARB Method 3 or 100.
- 3. A source test protocol shall be submitted and approved in writing by the Air Pollution Control Officer prior to conducting source testing.
- 4. Alternative test methods may be used upon obtaining the approval of the Air Pollution Control Officer.